

# Southern California Comments on Interim Environmental Review of U.S.-Thailand Free Trade Agreement (FTA)

## I. Introduction and Background

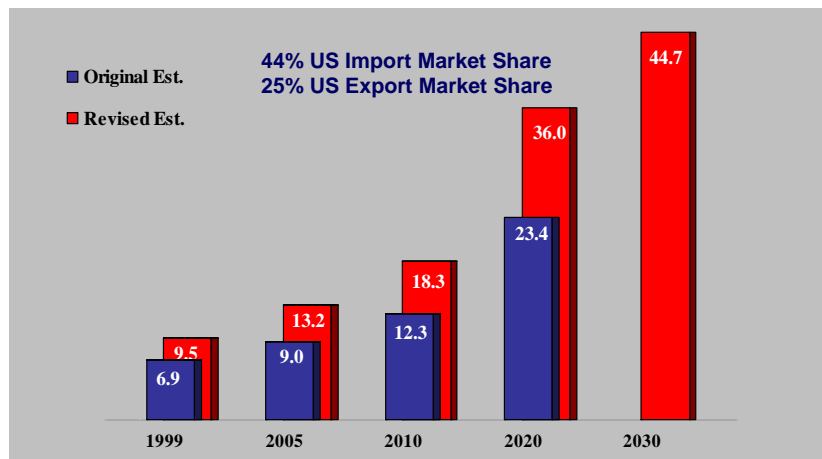
Past federal agreements on international trade have caused tremendous localized environmental, public health, quality of life, and infrastructure impacts in Southern California. This is true for both marine and land-based modes of cargo transportation: vessels sailing to and from China as well as trucks crossing in and out of Mexico.

Southern California has long been in the unenviable position of having the nation's worst air quality. It is becoming clearer that the use of bunker and diesel fuel, predominantly for the transport of freight, is a large contributor to this status. Indeed, as passenger vehicles become cleaner, the impact of freight movement becomes even more pronounced. Furthermore, new health studies are drawing ever stronger conclusions about the association of pollution with public health effects such as asthma and reduced lung function.

Our local transportation infrastructure also bears a national burden from international trade. Taken together, the two huge ports of Los Angeles and Long Beach are the fifth largest container ports in the world. They handle over 40% of the nation's imported container trade and a quarter of its exported containers. Our freeways and rail lines, already famously congested, are the sites of daily competition between vehicles moving people and those moving freight.

To be sure, trade volume with Thailand is small compared to the total U.S. trade volume. However, the added trade facilitated by the FTA will contribute to a cumulative local impact that is enormous. This impact is described in Section II. Figure 1 shows the projected trend in Southern California's container trade.

**Figure 1. Total Actual and Projected Container Growth,  
Ports of Los Angeles & Long Beach, CA (million TEU\*)**



\* Source: Ports of Los Angeles and Long Beach; TEU = Twenty-foot Equivalent Unit

The top bullet item on Page ii of the Executive Summary of the Interim Environmental Review states that “the United States-Thailand FTA is not expected to have a negative impact on the ability of U.S. government authorities to enforce or maintain U.S. environmental laws or regulations.” We disagree. The additional emissions burden from increased Thai trade, however small, will move Southern California even farther away from attainment of health-based ambient air quality standards.

In economic terms, these impacts are externalities: no party to the trade transactions pays the cost of mitigation. The negotiation of the U.S.-Thailand FTA offers an opportunity to seek alternatives to this model that will ensure future trade benefits without undue local burdens. Because of the small volume of trade, it offers a particularly attractive opportunity to try new approaches without putting a large portion of U.S. trade at risk.

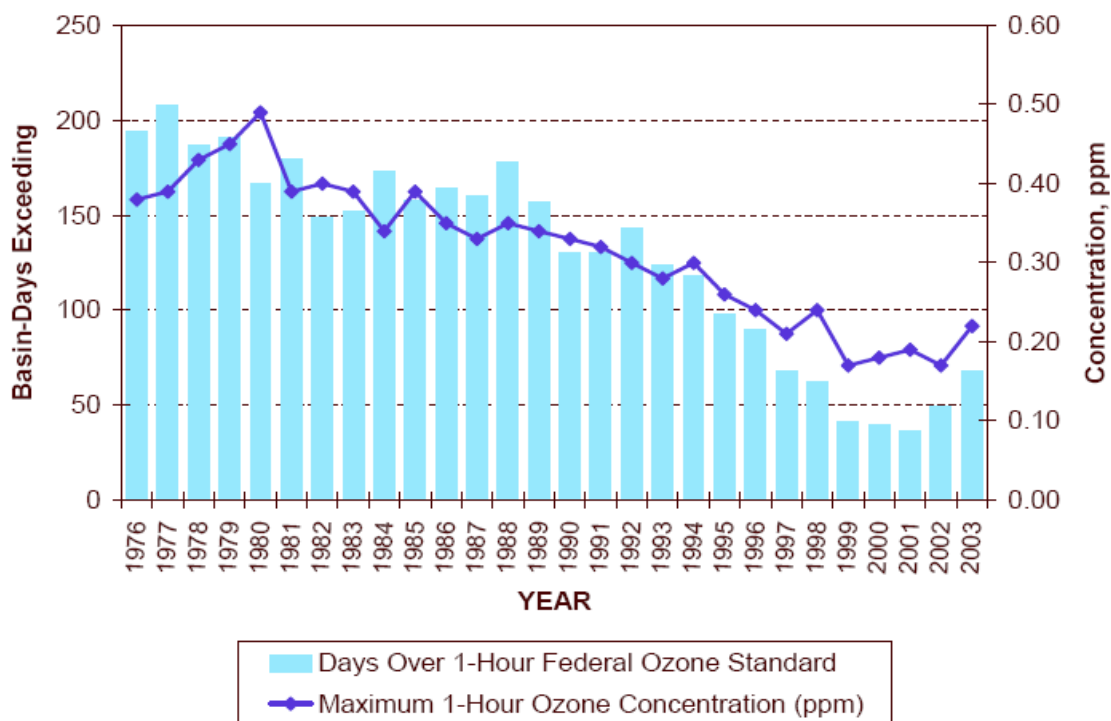
## II. The Localized Impacts of International Trade

### A. Public Health Impacts

Despite the daunting challenges of a large urban area, a huge human and vehicle population, and a ring of mountains that traps pollution, Southern California has made great strides towards better air quality. However, the region is beginning to lose ground, as shown in Figure 2.

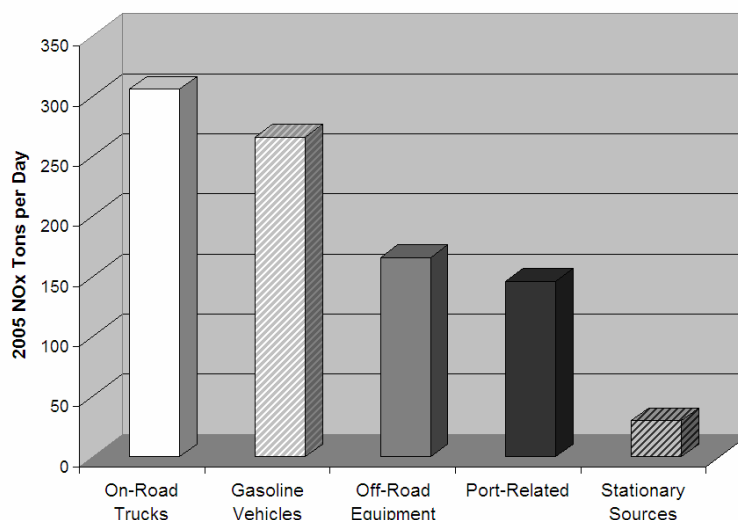
**Figure 2.**

### South Coast Air Basin Smog Trend



In December 2005, the California Air Resources Board (CARB) issued a draft Emission Reduction Plan for Ports and International Goods Movement in California. This document compiles and summarizes current estimates of goods-movement related air pollutant emissions, both statewide and in Southern California. The document estimates that “[r]oughly one-third of all goods movement emissions statewide are generated in the Los Angeles region.” It also points out that “[o]n a typical day, more than 400 tons per day of NO<sub>x</sub> are emitted from ports and goods movement activities in California, representing about 10 percent of the statewide NO<sub>x</sub> inventory.”

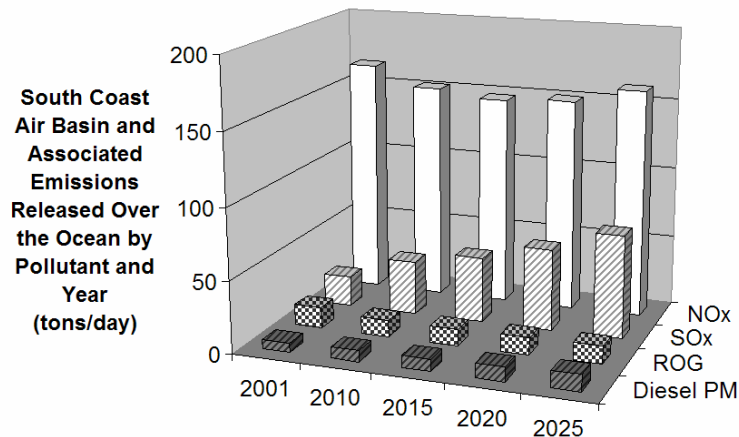
**Figure 3. Estimated 2005 NO<sub>x</sub> Emissions in the South Coast Air Basin (tons/day)**



Source: State Goods Movement Action Plan, Phase I, September 2005; California Air Resources Board, California Emission Inventory Development and Reporting System (CEIDARS).

Figure 3 shows the estimated magnitude of NO<sub>x</sub> emissions from all source types in Southern California. Note the large contributions from both port-related sources and on-road trucks. Figure 4 shows the estimated growth in goods-movement related emissions over time in Southern California, given current practices and trends.

**Figure 4. Ports and International Goods Movement Emissions in the South Coast Air Basin**



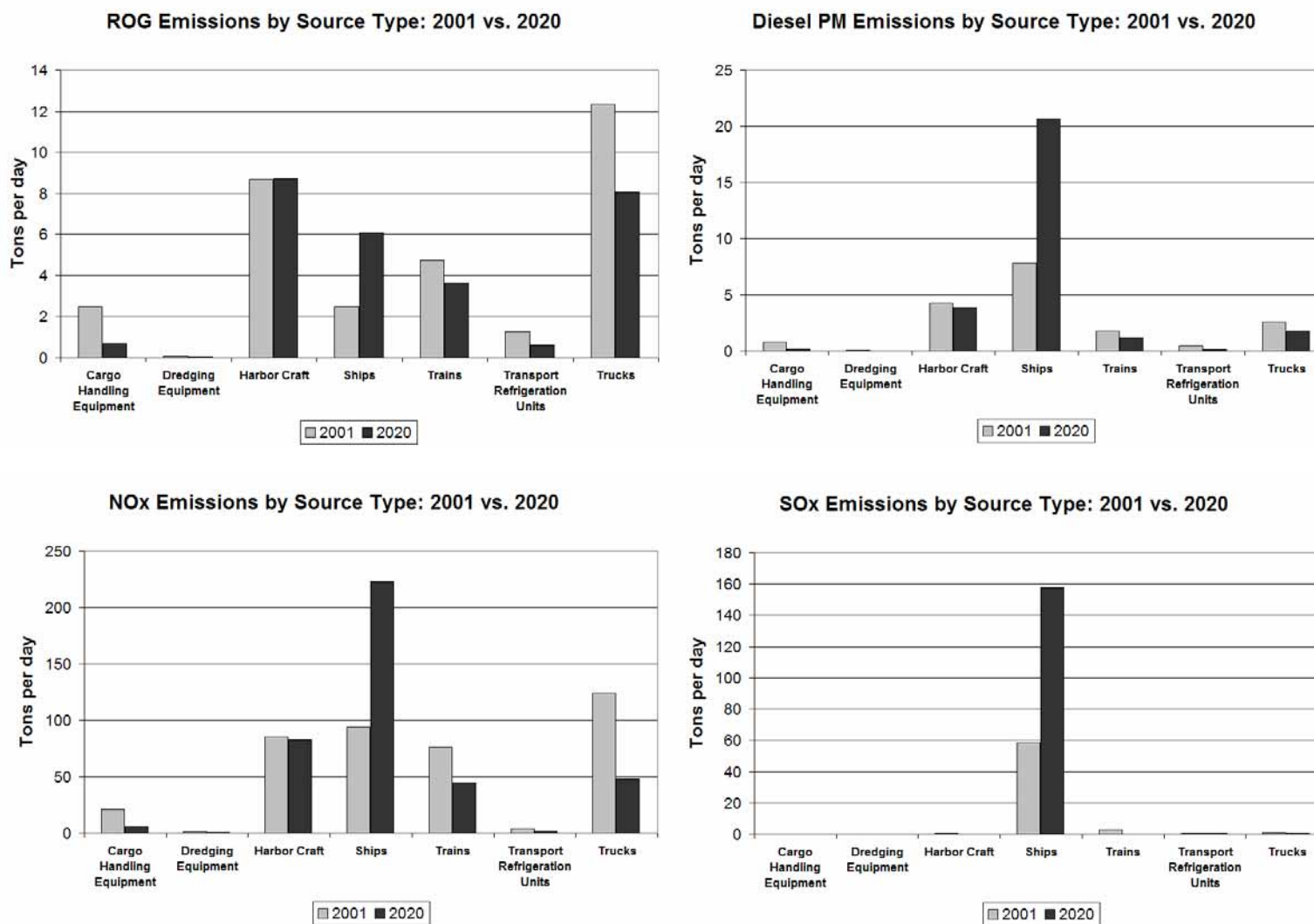
Source: Estimates from California Air Resources Board Draft Emission Reduction Plan for Ports and International Goods Movement in California, December 2005

In Figure 4, note the near doubling of diesel particulate matter emissions. While their magnitude may be small in comparison to NOx emissions, diesel particulate has been listed by the State of California as a toxic air contaminant. The South Coast Air Quality Management District, in its 2000 Multiple Air Toxics Exposure Study (MATES) II, found that 70% of excess lifetime cancer risk from toxic air pollutants in the region was attributable to this pollutant.

Figure 5 on the next page shows the relative contributions of various source types to the statewide goods movement emissions inventory for four pollutants, in 2001 and projected for 2020. Note that ocean-going vessels (ships) will come to dominate the emissions inventory as other sources are gradually controlled. These vessels present a particular challenge to Southern California since their emissions are not under local, state, or even federal jurisdiction. The FTA with Thailand would, however, likely increase vessel traffic to Southern California. According to the Interim Environmental Review (Annex VII, Data Tables), the Los Angeles Customs District handles the single largest share of U.S. trade with Thailand (32.4% of imports and 29.7% of exports in 2004, by customs value) when compared with all other U.S. customs districts. Even a small increase in vessel traffic will serve only to worsen Southern California's air quality and the public health problems it causes.

**Figure 5. Statewide Ports and International Goods Movement Emissions:  
2001 v. 2020**

Source: California Air Resources Board Draft Emission Reduction Plan for Ports and International Goods Movement in California, December 2005



Recent studies by Southern California researchers have demonstrated clear associations between ozone and diesel particulate pollution and public health impacts. The 10-year University of Southern California Children's Health Study found that "children in the more-polluted communities have:

- Reduced lung function growth (their lungs grow more slowly)
- Improvement in lung function if they move to a less polluted community
- More school absences from acute respiratory problems when ozone levels go up
- Asthma exacerbation (in areas with more traffic-related pollutants)
- More cases of newly diagnosed asthma (in areas with high ozone levels)."<sup>1</sup>

Another study published in the Journal of the American Medical Association concluded that "[l]ong-term exposure to combustion-related fine particulate air pollution is an important environmental risk factor for cardiopulmonary and lung cancer mortality."<sup>2</sup> Other studies have found:<sup>3</sup>

- Elevated risk of lung cancer in railroad workers (Garshick et al. 2004)
- More asthma cases among those within 150 m of a major road (McConnell et al 2005)
- Thickening of arterial walls in elderly women with exposure to fine particles (Künzli et al. 2005)
- Higher risk of pre-term and low-birth-weight babies near freeways with heavy truck traffic (Ritz et al. 2002)
- Triple the normal risk of cardiac birth defects in high-pollution areas (Ritz et al. 1998)
- Ultrafine particles (smaller than .1 micron) lodged in the brain and heart and in the mitochondria of cells (Oberdorster et al. 2004; Southern California Particle Center<sup>4</sup>).

The implications of these findings are reflected in estimated public health impacts summarized by CARB in Table 1. The agency estimates that anywhere from 260 to 1300 excess premature deaths occur per year in the state as the result of particulate matter and ozone levels related to international goods movement, as well as approximately 15,000 excess asthma attacks per year and 130,000 lost work days per year. The total estimated economic cost of these and related health effects: approximately \$6.3 billion per year, statewide.

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<sup>1</sup> "Road To An Unhealthy Future For Southern California's Children," Andrea M. Hricko, USC Keck School of Medicine, August 2004. Also see W. James Gauderman et al., "The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age," New England Journal of Medicine 351:1057-67, 2004.

<sup>2</sup> C. Arden Pope et al., "Lung Cancer, Cardiopulmonary Mortality, and Long-Term Exposure to Fine Particulate Air Pollution," Journal of the American Medical Association 287:1132-1141, 2002.

<sup>3</sup> The following references are cited in a presentation by Ed Avol of the USC/UCLA Southern California Environmental Health Sciences Center, available at [http://scag.ca.gov/goodsmove/pdf/gmtf111605\\_EdAvol.pdf](http://scag.ca.gov/goodsmove/pdf/gmtf111605_EdAvol.pdf).

<sup>4</sup> See <http://www.ph.ucla.edu/scpcs/> for references and further information.

**Table 1: Annual 2005 Statewide PM and Ozone Health Effects Associated with Ports and International Goods Movement<sup>1</sup>**

Health Outcome	Cases per Year	Uncertainty Range <sup>2</sup>	Valuation (millions)	Uncertainty Range <sup>3</sup>
Premature Death	750	260 to 1,300	\$6,200	\$2,100 to 12,000
Hospital Admissions (Respiratory Causes)	290	170 to 410	\$10	\$6 to 14
Asthma Attacks	15,000	3,600 to 26,000	\$1	\$0 to 2
Work Loss Days	130,000	110,000 to 150,000	\$23	\$19 to 26
Minor Restricted Activity Days	880,000	630,000 to 1,100,000	\$53	\$25 to 110
School Absence Days	330,000	85,000 to 610,000	\$28	\$7 to 53
<b>TOTAL VALUATION</b>	<b>N/A</b>	<b>N/A</b>	<b>\$6,300</b>	<b>\$2,200 to 12,000</b>

<sup>1</sup>Does not include the contributions from particle sulfate formed from SO<sub>x</sub> emissions, which is being addressed with several ongoing emissions, measurement, and modeling studies.

<sup>2</sup>Range reflects uncertainty in concentration-response functions, but not in emissions or exposure estimates.

<sup>3</sup>Range reflects statistically combined uncertainty in concentration-response functions and economic values, but not in emissions or exposure estimates.

Source: California Air Resources Board Draft Emission Reduction Plan for Ports and International Goods Movement in California, December 2005

The bullet item on Page i of the Executive Summary of the Interim Environmental Review says that “the likelihood and magnitude of [localized environmental] effects and increased risks, while difficult to quantify, appear to be small.” While the magnitude of increased risks associated with Thai trade may indeed be small, we disagree that the likelihood is small – in fact, increased impacts are all but assured unless certain actions are taken.

## ***B. Quality-of-Life Impacts***

Community members living in the areas most affected by goods movement cite numerous impacts to their quality of life, including:

- Noise from port activities, intermodal yards, and freeways, both during the day and at night. As freight movement spills into evening and weekend hours to accommodate growing volume, these impacts can be expected to worsen.
- Light at all hours from freight-related facilities.
- The visual blight resulting from proximity of freight facilities (intermodal yards, freeways, and warehouses) to homes. Residents complain of freight containers stacked so high that they begin to block the sky, and of trucks parked on

neighborhood streets. Truck intrusion into neighborhoods and near schools creates additional concerns.

- Vibration from passing trucks and trains.
- Derailment of freight trains into residential neighborhoods.
- Restricted mobility where rail lines cross local streets. These situations can reduce police, fire, and ambulance response times; divide neighborhoods; pose a risk to pedestrians; and cause general travel delay for residents.
- Loss of agricultural lands and open space to the increasing development of large warehouses.

Residents of the areas most impacted by freight operations tend to have low incomes and often are members of minority groups. Thus both the health and quality-of-life issues are environmental justice issues. Federal policies direct the government to address environmental justice, and it is our hope that the trade agreement will not exacerbate these inequities.

## ***C. Infrastructure Impacts***

In addition to the impacts described above, international trade brings with it heavy demands on Southern California's highway and rail infrastructure. The region's highway system is aging and there is little room in our crowded region for new expansion. It has been estimated that a single loaded tractor-trailer can cause as much pavement damage as the passage of 2,000 passenger vehicles.<sup>5</sup> Caltrans has spent an estimated total of about \$15 million over the last 20 years just to repair damage done by trucks hitting overpasses for which they are too tall.<sup>6</sup>

Of course, Southern California is legendary for its heavy traffic congestion. Figure 6 presents estimated future truck delay figures for the region in 2030 from the Regional Transportation Plan. Note that even with all the regional infrastructure investments in the Plan, daily truck delay will more than double. Without these investments ("Baseline" conditions), delay will more than triple. Figure 7 emphasizes the dramatic growth in port-related truck trips expected in our region as a result of growth in international trade.

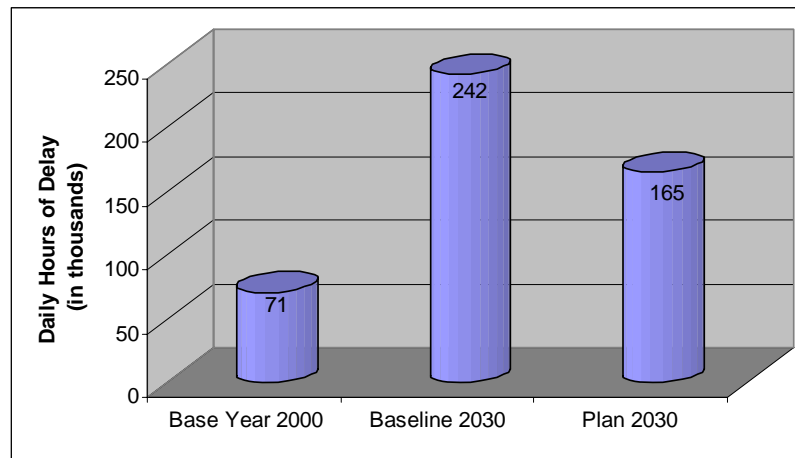
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<sup>5</sup> Estimate attributed to the Center for Transportation Research at the University of Texas in Austin.

<sup>6</sup> Caltrans Transportation Permits Management System, Objectives,  
<http://www.dot.ca.gov/hq/traffops/permits/tpms/index.htm>.

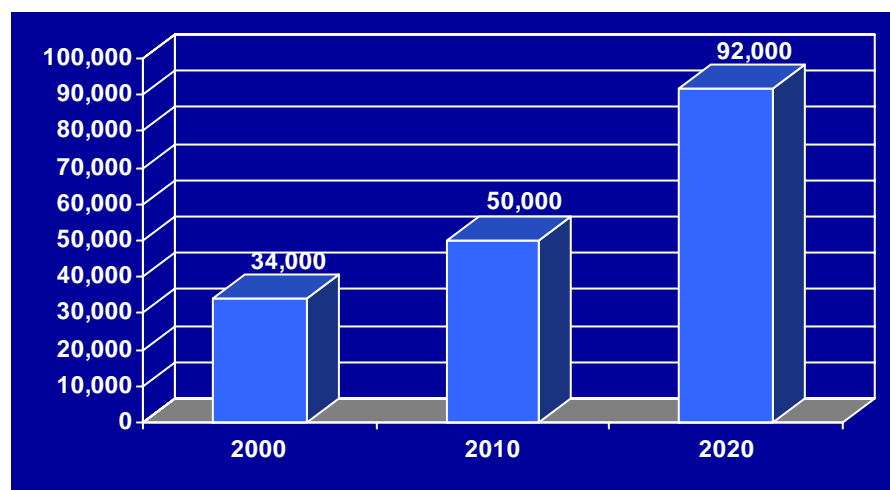


**Figure 6. Current and Projected Heavy Duty Truck Delay in Southern California**



Source: 2004 Regional Transportation Plan, SCAG

**Figure 7. Projected Growth in Daily Truck Trips Serving Ports of Los Angeles and Long Beach, CA**



Source: Gill V. Hicks & Associates

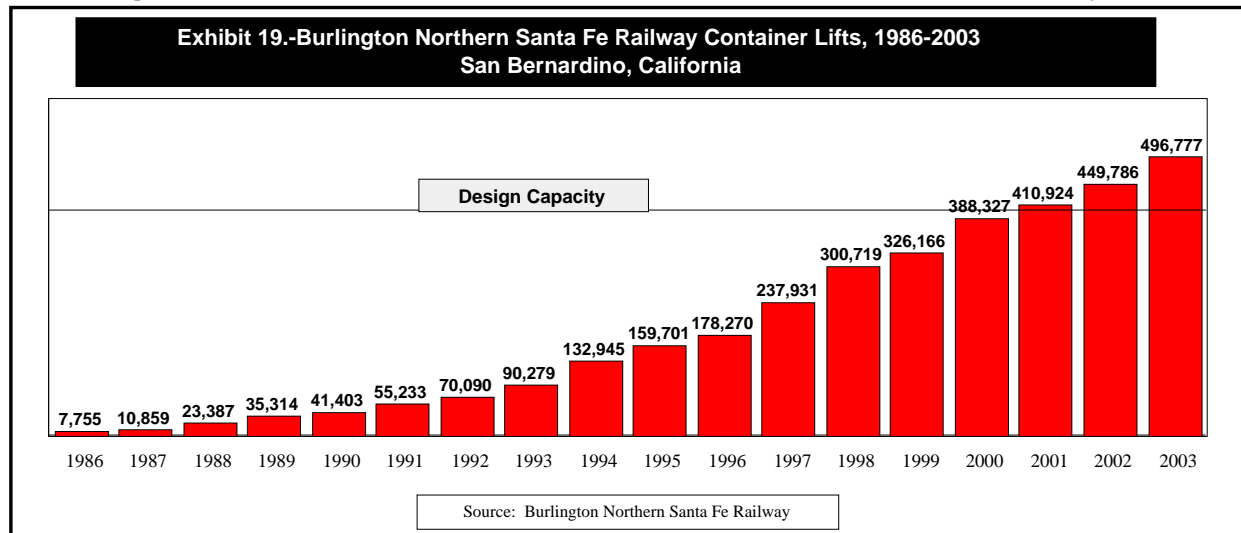
Southern California's highway capacity is funded more and more from local sources, but is used to benefit interstate commerce with only limited local benefits. According to the state's Draft Goods Movement Action Plan, Phase II, "The amount [of local sales tax revenue] dedicated collectively for state highway improvements has come to provide nearly fifty percent of the new capacity improvements to the state system."

Freight rail and intermodal yard capacity are also inadequate to accommodate projected growth. It has been projected that with no new rail mainline capacity, the region could reach rail gridlock by 2010.<sup>7</sup> Commuter rail service shares the tracks with freight

<sup>7</sup> SCAG, Los Angeles-Inland Empire Railroad Mainline Advanced Planning Study, October 2002, <http://scag.ca.gov/goodsmove/pdf/LABasinMainLine2002.pdf>.

trains, making it even more imperative to provide sufficient capacity. Furthermore, the region's intermodal rail yards are stretched to capacity, as illustrated by the example in Figure 8. It is not clear that the railroads have access to sufficient capital to timely meet demand.

**Figure 8. Intermodal Container Growth at BNSF San Bernardino Facility**



### III. Federal Cooperation in Addressing Localized Impacts

In submitting these comments, our goal is not to discourage the development of trade agreements in general, or to oppose this one in particular. Instead, we wish to highlight the need for federal assistance in addressing the localized impacts from international trade.

The local impact of international trade is a national issue not just because it is an outcome of federal policy, but also because it is a problem experienced – though perhaps to a lesser degree – by other areas around the country. In 2000, Southern California, by handling a large proportion of the nation's international maritime trade, supported 2 million jobs nationally that paid over \$61 billion in income. In that year, Southern California trade provided the nation with \$208 billion in economic output and generated \$16.4 billion in state and local tax revenues.<sup>8</sup>

Many localized impacts are a direct result of past federal trade policy and relate to benefits received by the rest of the nation. Hence it is a federal responsibility to cooperate with state, regional, and local governments to address these impacts. To provide for this cooperation, an effort is currently underway to establish a collaborative process among affected local, state and national agencies and interests to focus on the environmental impacts attendant to increased imported goods movement within Southern California. A proposed Memorandum of Understanding (MOU) for this purpose is currently being discussed by the regional transportation agencies with the key State and federal agencies.

<sup>8</sup> OnTrac Trade Impact Study, BST Associates in collaboration with Los Angeles County Economic Development Corporation, December 2002.

This MOU would provide a significant opportunity, a case study, for the federal agencies to better understand and address the local impacts attending such international trade agreements.

## ***A. Possible Federal Support***

There are a number of critical ways in which the federal government can support the region in constructively addressing local impacts from international trade.

- **Improvement of environmental review processes under the National Environmental Policy Act (NEPA)**

The NEPA reviews for elements of the Southern California goods movement system could provide a framework for developing regional goods movement solutions that honor objectives of the act: a productive harmony between humans and nature, and the fulfillment of social, economic and other requirements of present and future generations of Americans. We look to our federal partners to promote collaboration among the affected agencies and interests (including the federal agencies) as NEPA applies to our regional system. We also would anticipate that these nationally critical investments would receive the benefit of expedited federal NEPA reviews, as available and provided for under Executive Order 13274.

- **Support for innovative funding approaches**

Collaboration may extend as well to the exploration and implementation of both Administration and legislative programs in support of funding capabilities. These programs and actions could include:

- Federal appropriations and earmarks for Southern California freight-related projects to reflect the national interest at stake;
- Programs to increase the capability for public-private partnership investment, such as expanding eligibility for TIFIA<sup>9</sup>, providing for tax-exempt private activity bonds and tax-credit bonds for goods movement projects, and exploring tax credit equity arrangements.<sup>10</sup>
- Clearing any obstacles that could prevent the adoption of private user fees as a source of project revenue.

- **Control of pollution sources under federal jurisdiction**

It is imperative that the federal government take aggressive action to control sources of emissions that are under federal jurisdiction – including locomotives, trucks, aircraft, and other equipment used in goods movement – in coordination with State and local programs. The need for these actions should be evident given the health impacts described earlier. It

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<sup>9</sup> Transportation Infrastructure Finance and Innovation Act of 1998

<sup>10</sup> For further details on these and related mechanisms, see “Southern California Regional Strategy for Goods Movement: A Plan for Action,” February 2005, at <http://scag.ca.gov/goodsmove/pdf/GoodsmovePaper0305.pdf>.

is also worth noting that local communities will not allow any new freight projects to proceed, and the region will be even less able to accommodate additional trade from Thailand or any other region, unless these health impacts are addressed.

- **Federal action to control vessel emissions**

The US has no direct jurisdiction over foreign-owned vessels. However, the federal government can act in this arena. Specifically, we urge immediate Senate ratification of Annex VI to MARPOL, the International Maritime Organization's Marine Pollution Treaty, which relates to the sulfur content of vessel fuels. Once this treaty annex is ratified, a North American Sulfur Emissions Control Area (SECA) can be established, within which vessels will be required to use lower-sulfur fuel, thus reducing on-shore impacts. Adopting a SECA for the entire continent will avoid any differential impact to shipping on one coast versus another.

## ***B. Additional Considerations***

As mentioned earlier, because of the relatively small volume of trade between Thailand and the U.S., this agreement offers an opportunity to try new approaches without putting a large trade volume at risk. For example, since the MARPOL Annex VI fuel sulfur standards are not terribly stringent (though they certainly would represent an improvement), the U.S. could use this FTA to insist on more aggressive fuel standards. The U.S. could also take the opportunity to explore requiring other steps by vessels in the Thai trade, such as the use of alternative vessel fuels, retrofits of emission control equipment in or near port, the use of vessels equipped for alternative maritime power (shoreside power), and vessel speed reduction.

## **IV. Conclusion**

We appreciate the opportunity to comment on the Interim Environmental Review for the U.S.-Thailand Free Trade Agreement. We believe that the federal government will understand the concerns we raise here and we look forward to working in partnership so that both the region and the nation can benefit from international trade.